Devils Lake Outlets

Estimating Outlet Discharges

Outlet Discharge Overview

The State Water Commission operates the Devils Lake outlets according to specific operating plans.

E-mail notifications are sent out to interested parties when the outlets are turned on and off at the beginning and end of the operating season, as well as during longer-term periods of outlet inactivity due to maintenance or mechanical issues.

Discharges from the Devils Lake outlets are frequently adjusted to meet water quality and quantity limitations, so it is impractical to provide notification for every change in outlet operation.

Real-time streamflow values can be obtained from the USGS, and three gage sites can be used to determine the rate of outlet discharges. Flow values may vary from the current actual discharge, due to local inflow and the time lag as noted. However, these sites provide the best means available to estimate the current outlet discharge rates.

DEVILS LAKE OUTLETS OPERATING PLAN
http://swc.nd.gov/pdfs/outlets_operations_plan_2011_12_06.pdf

Determine West Outlet Discharge

Bremen Gage Flow — Flora Gage Flow = Approximate Discharge Amount

Sheyenne River USGS 05055400 — Sheyenne River USGS 05055300

The Flow at the Bremen Gage reflects a 16-hour lag time from the Round Lake Intake on the West Devils Lake Outlet.

Determine East Outlet Discharge

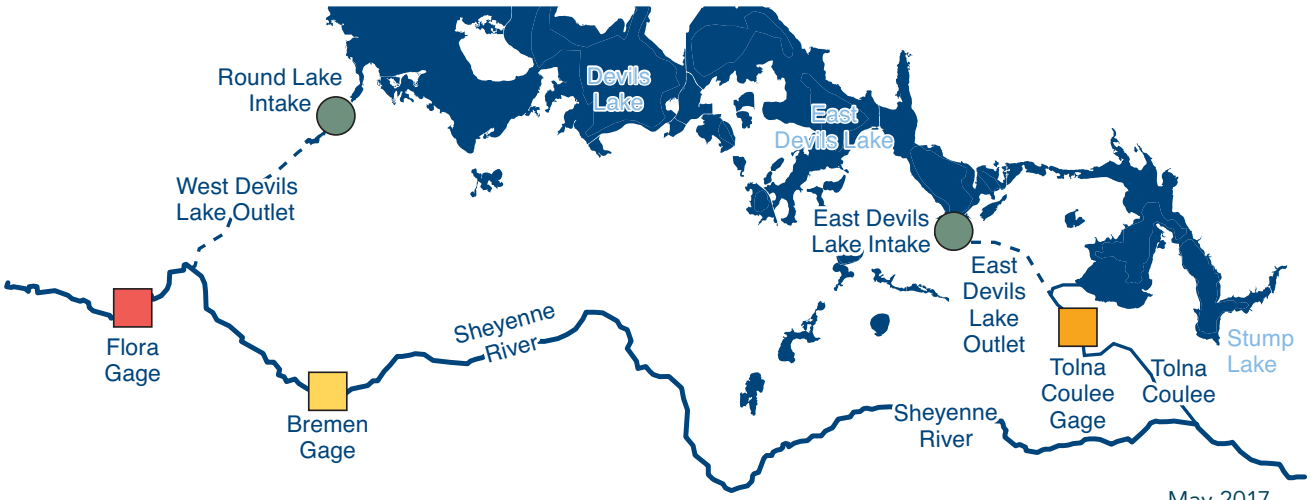
Tolna Coulee Gage Flow

Tolna Coulee USGS 05056678

The East Devils Lake Outlet discharge is approximately equal to the flows at the Tolna Coulee Gage.

Add the left and right culvert values to determine the East Outlet discharge.

The flow at the Tolna Coulee Gage reflects a 3-hour lag time from the East Devils Lake Outlet.



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